UNITED
NATIONS

E

Economic and Social Council

Distr.
GENERAL

E/1997/52
15 May 1997

ORIGINAL: ENGLISH

Substantive session of 1997
Geneva, 30 June-25 July 1997
Item 7 (a) of the provisional agenda*

REPORTS, CONCLUSIONS AND RECOMMENDATIONS OF SUBSIDIARY BODIES: ECONOMIC QUESTIONS

Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific

Report of the Secretary-General

SUMMARY

The Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific was convened in accordance with Economic and Social Council decision 1994/228 of 14 July 1994. The Conferences provide a regional forum where governmental officials, planners, scientists and experts from Asia and the Pacific and other regions address common needs and problems and share experiences in the cartographic and related fields. The Fourteenth Conference was held at the headquarters of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), in Bangkok, from 3 to 7 February 1997.

Acknowledging the significant progress made in the cartographic and related fields and further to the reappraisal of the goals of cartography and related techniques to meet the "sustainable challenge" of the twenty-first century, the Conference focused on the increased and successful contribution of surveying, mapping and charting to the implementation of Agenda 21 in the Asia and Pacific region. Strengthening of communication and cooperation among countries of the region, sharing of skills and experience, joint project activities and common approaches to policy and management issues were highlighted, while the increasing role of academic and research institutions, the private sector, and non-governmental organizations were duly recognized.

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The participants, bearing in mind the important contribution made by the regional cartographic conferences to the regional cartographic community, recommended that the Economic and Social Council should convene the Fifteenth Conference for Asia and the Pacific in mid-2000, with a primary focus on the continuing assessment and improvement of the contribution of surveying, mapping and charting to the implementation of Agenda 21.

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INTRODUCTION

1. The Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific was held at the headquarters of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), in Bangkok, Thailand, from 3 to 7 February 1997. The Conference was held in accordance with Economic and Social Council decision 1994/228 of 14 July 1994. The Conference was attended by 158 representatives and observers of 29 countries and territories[1] and four intergovernmental/international scientific organizations.[2] The Conference elected the representative of the Philippines as President.

2. The Conference had been recognized as a forum for technical cooperation, technology transfer and programme coordination for the countries of the Asia and Pacific region, providing governmental officials, planners, scientists and experts from Asia and the Pacific and elsewhere with an opportunity to address common needs, problems and experiences in the field of surveying and mapping, cartography, hydrography, remote sensing, land and geographical information systems, including their educational and training aspects, scientific and technological requirements, implementation issues and benefits. The agenda of the Fourteenth Conference, while fully reflecting that role, also acknowledged how the significant progress made in cartography and related fields had contributed to the reappraisal of goals in the area to meet the "sustainable challenge" of the twenty-first century. Thus a special emphasis was given to the contribution of surveying, mapping and charting to the implementation of Agenda 21[3] and the monitoring of the regional implementation of multinational environmental agreements. The Conference addressed three major substantive topics:

(a) Land resources and environmental management;

(b) Enabling technologies;

(c) Policies and management.

3. The work of the Conference was organized around three technical committees. Country reports were covered by a specific item of the agenda, as were the specific reports on the contribution of surveying, mapping and charting to support the implementation of Agenda 21. In view of the many faceted nature of the contribution of cartography to the implementation of Agenda 21, some specific issues were addressed in more than one technical committee. Committee I, on land resources and environmental management, was chaired by the representative of the Republic of Korea; Committee II, on enabling technologies, was chaired by the representative of Indonesia; Committee III, on policies and management, was chaired by the representative of Malaysia. The Conference adopted 20 resolutions, grouped under three headings: general policies, transfer of technology, and institutional issues; and one vote of thanks.

4. The proceedings of the Conference will be issued in two volumes. Volume I will contain the report of the Conference, including the resolutions adopted; volume II will contain the technical papers presented at the Conference.

I. FINDINGS

5. A review of national reports submitted by countries in the Asia and Pacific region and elsewhere showed major trends affecting cartography. As anticipated, recent years had shown the significant and continuing contribution of surveying, mapping and charting to the implementation of Agenda 21 and sustainable development. That had taken place in parallel to a move towards the strengthening of communication and cooperation between countries in the region, exemplified by the sharing of skills and experience, joint project activity and common approaches to policy and management issues. The increasing role of non-governmental organizations in that process was rightly stressed by the Conference, which acknowledged the activities being launched by the newly created Association of Southeast Asian Nations Federation of Land Surveying and Geomatics (ASEAN FLAG). At the same time, the Conference welcomed the active role played by the Permanent Committee on GIS Infrastructure for Asia and the Pacific, a regional organization established in 1995 as a result of resolution 16 of the 1994 Thirteenth Regional Cartographic Conference (Beijing). The Conference also acknowledged the growing involvement of academic and research institutions and of the private sector in the region.

6. Other major trends observed in the region included the growing awareness of the concept of the Spatial Data Infrastructure (SDI), the acceleration in implementation of national SDI programmes, and the recognition of the importance of regional and global SDI. The development and acceptance of standards for global SDI was a major issue, since global SDI capabilities were beginning to be integrated into mainstream information technologies. The availability, accessibility, management, and integration of digital spatial data had challenged the international community to form spatial data infrastructures. Those structures could be national, regional, or global. Their components were technology, standards, policy, and institutional framework. Various working groups had contributed to standardization at the regional and global levels, supported by national standards organizations.

7. Similarly, a move towards a common geocentric datum for the region, the increasing availability of fundamental datasets and the growth in the use of the Internet as a primary means of communication in the region had been acknowledged by the Conference.

8. The Conference, through the work of Committee I on land resources and environmental management, acknowledged the contribution of surveying, mapping and charting to the implementation of Agenda 21. Relevant aspects related to environmental management, including management of the oceans and disaster mitigation; land reform, land management and development; demography and human settlements policies; and desertification and land degradation. Many countries reported how the recent introduction of geographic information systems (GIS) technologies had contributed to a better understanding and management of land resources, disaster prevention and mitigation, land reform, land management and development. Concrete examples of how modern survey technology and computerized information technology had contributed in some countries to more efficient land management and improved cadastral records were discussed by the Conference.

9. Efforts to promote the concept of global mapping were also reported at the Conference. Global Map is a new term for geographic information databases designed to cover the whole globe with consistent specification. The Geographic Survey Institute (GSI) of Japan had developed the global mapping concept at a ground resolution of 1 km at a scale of 1:1,000,000 in paper maps. The data might serve as an element of a Global Spatial Data Infrastructure (GSDI). An International Steering Committee for Global Mapping (ISCGM) had been established in 1996. The Conference was informed of the conclusions and recommendations of the recent Interregional Seminar on Global Mapping for Implementation of Multinational Environmental Agreements, held in Santa Barbara, United States, in November 1996. The seminar was jointly organized by the United Nations Secretariat, Department for Development Support and Management Services; the University of California at Santa Barbara, and the Geographic Survey Institute of Japan. The seminar recognized the contribution of global mapping to the implementation of Agenda 21, pointing out the potential role of the international community and the United Nations in the development of Global Map, and suggested the creation of a global mapping forum.

10. The Conference noted that no report had been submitted in response to the agenda item entitled "Reports on the regional implementation of the Programme of Action for the Sustainable Development of Small Island Developing States and the Declaration of Barbados". The Conference also noted with concern that, since no contributions had been submitted by small island developing States, the resolution taken by the Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific on the attendance of small Pacific island States had had little effect.

11. In addressing the safety of maritime and air navigation, including hydrographic surveys and nautical charting, Committee II, on enabling technologies, reviewed progress made on hydrographic charts, including products made available to the civil sector by the National Imagery and Mapping Agency (NIMA) of the United States, which enhanced the safety of marine navigation. Vector Product Format (VPF) covered a wide range of products available and planned such as 1:50,000 to 1:1 million multipurpose databases, littoral databases, special submarine navigation products, and navigation databases supporting safe navigation. Digital Nautical Chart (DNC), a step in replacing the paper chart, was developed to satisfy international standards, such as those promoted by the International Maritime Organization and International Hydrographic Organization (IHO). By 1999, it was expected that DNC would cover 29 regions with 3,700 charts, using the world geodetic system datum. NIMA was developing an appropriate software, Full Utility Navigation Demonstration (FUND), to familiarize users with digital nautical charts. The Conference was informed that DNC covering foreign areas would not be put on public sale until appropriate agreements with affected countries had been secured.

12. Other achievements reported at the Conference included an Electronic Navigational Chart (ENC) produced on CD-ROM, using established standards. ENC used four databases - the hydrographic source database, the nautical chart database, the electronic chart database, and the paper chart database. ENC was seamless and covered several thousand square kilometres and was updated by means of Notices to Mariners. Four CD-ROMs had been produced by Japan, at scales smaller than 1:100,000, covering the surrounding waters of Japan. The Japan

Hydrographic Association was producing an electronic reference chart in integrated circuit memory card format for the electronic chart system. As of the end of 1996, 28 had been produced and were currently available.

13. Policies and management were issues covered by the work of Committee III. Several themes recurred in a large number of papers. With regard to one of them, the Conference recognized that the successful creation of national spatial databases and data infrastructure required coordinated control and consistent policies by national mapping organizations, backed by their respective Governments. In that respect, the fulfilment of Agenda 21 objectives would necessitate the creation of regional and global spatial infrastructures as well as effective two-way communication between the users and producers of information. It was worth noting that users and producers of information might not be within the same country, since the objects of interest might be transnational. The Conference also recognized that maturing information technologies and their general usage were the key impetus for the creation of national spatial infrastructures, without which national competitiveness and productivity would be diluted.

14. Non-governmental organizations continued to play a significant role in the transfer of technology and technical development, both by their active participation in their respective fields and by building bridges to governmental bodies. The evolution of technologies had obliged surveyors, cartographers, GIS practitioners and others in similar fields to keep upgrading their knowledge, in both managerial and technical areas, so as to remain relevant in a rapidly changing society. That implied that public accessibility to national spatial databases was an important element in enhancing national competitiveness and productivity. The Internet was an important enabler in that regard.

15. The deliberations of the three committees confirmed once again that the parallel development of cartographic technology and information technology was rapidly bringing cost-effective applications to surveying, charting and mapping and was providing a comprehensive set of tools and effective approaches for meeting the challenge of sustainable development and the priorities of the countries in the region.

16. A list of 21 resolutions adopted by the Conference and the proposed agenda for the Fifteenth United Nations Regional Cartographic Conference for Asia and the Pacific are attached in annexes I and II. The activities recommended by the Conference and those required for the preparation of the Fifteenth United Nations Cartographic Conference for Asia and the Pacific, deemed to be of a continuing nature, were included in the medium-term plan under programme 8 for the period 1998-2001, and it was anticipated that they would be incorporated into the proposed programme budget for the biennium 2000-2001. In respect to the latter, inclusion of those activities was not expected to give rise to additional expenditure. They were of a continuous nature and fell under the proposed programme budget for the biennium 1998-1999, under section 10 (development support and management services). Additional resources need not be sought for them every biennium.

II. RECOMMENDATIONS TO THE COUNCIL

17. In view of the continued and important contributions made by cartographic technologies and applications in the information stream to policy and decision makers, development planners and the public at large and by the United Nations Regional Cartographic Conferences for Asia and the Pacific in strengthening technical cooperation, facilitating the transfer of technology and enhancing programme coordination within the countries of the region, the Conference recommends that the Economic and Social Council:

(a) Endorse its recommendation that the Fifteenth United Nations Regional Cartographic Conference for Asia and the Pacific should be convened for five working days in mid-2000, with a primary focus on the continued and strengthened contribution of surveying, mapping and charting to the implementation of Agenda 21;

(b) Request the Secretary-General to take measures, where appropriate and within available resources, to implement the other recommendations made by the Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific. In particular, the United Nations should continue to support surveying, mapping and charting activities in the Asia and Pacific region and, inter alia, continue, within available resources, to facilitate the participation of the least developed countries and the small island developing States of the region.

Notes

[1] Australia, Brunei Darussalam, China, Cyprus, Democratic People's Republic of Korea, France, Germany, Guam, Holy See, Hong Kong, India, Indonesia, Iran (Islamic Republic of), Japan, Malaysia, Nepal, Netherlands, New Zealand, Nigeria, Oman, Philippines, Republic of Korea, Russian Federation, Saudi Arabia, Singapore, Sri Lanka, Thailand, United Kingdom of Great Britain and Northern Ireland, United States of America.

[2] Permanent Committee on Geographic Information System Infrastructure for Asia and the Pacific, International Cartographic Association (ICA), International Federation of Surveyors (FIG), International Society for Photogrammetry and Remote Sensing (ISPRS).

[3] Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 (United Nations publication, Sales No. E.93.I.8), vol. I, Resolutions Adopted by the Conference, resolution 1, annex II.

Annex I

LIST OF RESOLUTIONS ADOPTED BY THE CONFERENCE*

General policies

1. Funding for Spatial Data Infrastructure programmes

2. Fifteenth United Nations Regional Cartographic Conference for Asia and the Pacific

3. Involvement of Pacific island countries

4. Review of rules and procedures

5. Linkages with other international forums

6. Attendance at future United Nations Regional Cartographic Conferences for Asia and the Pacific

7. Monitoring the implementation of the resolutions of the United Nations Regional Cartographic Conferences for Asia and the Pacific

Transfer of technology

8. Asia and Pacific regional geodetic project

9. Maintenance of cartographic aspects in digital production

10. Standardization of digital cartographic database standards

11. Development of the Global Map

12. Permanent Committee on GIS infrastructure for Asia and the Pacific

13. Workshop on land rights, land responsibilities and restrictions

14. Spatial data infrastructure (SDI)

Institutional issues

15. Linking cadastral mapping with topographic mapping within a wider SDI

16. Updating of past mapping inventories

17. Notification of United Nations Regional Cartographic Conferences for Asia and the Pacific

18. Participation of the Association of Southeast Asian Nations Federation of Land Surveying and Geomatics (ASEAN FLAG) as a non-governmental organization at United Nations meetings on surveying and mapping

19. Involving non-governmental organizations in development and provision of cadastral systems

20. Strengthening non-governmental organizations

Vote of thanks

21. Vote of thanks

Notes

[a] The text of the resolutions will be included in the Report of the Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific (E/CONF.89/5; to be issued as a United Nations publication).

Annex II

PROPOSED PROVISIONAL AGENDA FOR THE FIFTEENTH UNITED NATIONS REGIONAL CARTOGRAPHIC CONFERENCE FOR ASIA AND THE PACIFIC

1. Opening of the Conference.

2. Election of the President and other officers of the Conference.

3. Objectives of the Conference.

4. Organizational matters:

   (a) Adoption of the rules of procedure;

   (b) Adoption of the agenda;

   (c) Establishment of committees and election of Chairmen and Rapporteurs;

   (d) Organization of work;

   (e) Credentials of representatives to the Conference.

5. Report of the Permanent Committee on GIS Infrastructure for Asia and the Pacific (PC).

6. Country reports.

7. Report on the implementation of resolution No. 3 of the Fourteenth Conference.

8. Reports on the status of implementation of resolutions of previous conferences from countries, the United Nations and non-governmental organizations.

9. Reports on achievements in surveying, mapping and charting in addressing national, subregional, regional, and global issues, including:

   (a) New National Spatial Data Infrastructure (NSDI) and Asia and the Pacific Spatial Data Infrastructure (APSDI);

   (b) Environmental management including oceans and disaster mitigation;

   (c) Public access to and exchange of information;

   (d) Land reform, management, planning and development;

   (e) Human settlements, demography and policy;

   (f) Desertification and land degradation;

(g) Development of human resources;

(h) Safety of maritime and air navigation;

(i) Other applications of surveying and mapping in support of Agenda 21;

(j) Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (Declaration of Barbados);

(k) Policy and management of national surveying and mapping activities;

(l) Funding of national surveying and mapping activities;

(m) Technical cooperation and transfer of technology.

10. Review of the achievements of the Conference.

11. Provisional agenda for the Sixteenth Conference.

12. Adoption of resolutions and the report of the Fifteenth Conference.